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May 7, 2008

The Honorable Kevin J. Martin
Chairman
Federal Communications Commission
445 12th Street S.W.
Washington DC 20554

Re: WT Docket No. 07-293; ID Docket No. 95-91;
GEN Docket No. 90-357; RM-8610
Ex Parte Statement

Dear Chairman Martin:

This letter is in response to the Reply Comments filed by the WCS Coalition on March 17, 2008. The Coalition does not challenge the interference concerns expressed by the Aerospace and Flight Test Radio Coordinating Council ("AFTRCC") in its Comments filed February 14. On the contrary, the Coalition effectively admits that the mobile WiMax systems it proposes would cause interference to sensitive flight test receiving stations.[1]

Rather, the Coalition takes the flight test community to task for an alleged failure to "adapt" to the 43 + 10 log (P) dB out-of-band-emission ("OOBE") limit into 2360-2370 MHz, and the 70 + 10 log (P) dB limit into 2370 MHz and up, established for the Wireless Communications Service in 1997. Id. at 53. There are several problems with this argument.

First. The Coalition ignores the fact that the Commission invited comment on a "broad[]" array of issues related to the permanent rules for the Coalition's constituents including, expressly, the "risk of interference with adjacent channel licensees, whether they are WCS, SDARS or licensees outside of the 2305-2360 MHz range. . . ."[2] Flight testing is immediately adjacent to the band 2305-2360 MHz, and thus it is entirely appropriate for AFTRCC to raise its concerns about WCS OOBE levels.

[1] See Coalition Reply Comments at 52-53 ("AFTRCC is absolutely right" that portable, mobile and fixed subscriber stations could be deployed "in very close proximity to a telemetry receiver" and with a "'clear view of telemetry ground stations'" (quoting in part from AFTRCC's opening Comments at page 2)).
[2] Notice of Proposed Rulemaking, FCC 07-215, released December 18, 2007, at paras. 3 and 22.

Second. The Coalition is in no position to criticize aerospace licensees. The Coalition's constituents warehoused WCS spectrum for years while they tried to figure out what they wanted to do with it. To the extent anything has been clear about the 2345-2360 MHz WCS spectrum, it is that it generally can not be used for mobile/portable communications as the Commission had warned.[3] The Coalition's members acquired their spectrum knowing this to be the case. It is only because the Coalition now seeks to change the Rules of the game so as to facilitate widespread mobile/portable use that the issue of protection for adjacent flight test operations arises. By its own logic, it is the Coalition which should have "adapt[ed]" to the Rules set eleven years ago -- not AFTRCC Members.

Third. The Coalition overlooks the extraordinary efforts made by the United States during the recent World Radiocommunication Conference to protect the 2300-2400 MHz band for flight testing as against International Mobile Telecommunications ("IMT"). In particular, the U.S. together with Canada adopted a joint declaration that:

> The United States of America and Canada refer to footnote number 5.394 of Article 5 of the Radio Regulations concerning the use of the 2 300-2 390 MHz band in the United States and the 2 300-2 400 MHz band in Canada and state that, in application of the Final Acts of the World Radiocommunication Conference (Geneva, 2007) in those bands, the aeronautical mobile service for telemetry has priority over other uses by the mobile services. Furthermore, in conformity with additional allocations specified in footnote number 5.393 of Article 5 of the Radio Regulations in the 2 310-2 360 MHz band, the United States of America and Canada state that, in application of the Final Acts of the World Radiocommunication Conference (Geneva, 2007) in the band 2 310-2 360 MHz, they intend to use parts of this band for the broadcasting-satellite service (sound) and complementary terrestrial sound broadcasting service, which may preclude its use for terrestrial International Mobile Telecommunications (IMT).

Declaration No. 78, Document 427-E (WRC-07) (emphasis added). This development is further reason, if any be needed, for the Commission to protect aeronautical telemetry as against the OOBE changes sought by the Coalition.

The Coalition criticizes AFTRCC Members for not adding filters to protect in-band telemetry signals from WCS's out-of-band emissions. Id. at page 52. This argument betrays a fundamental misunderstanding of the issue. Id. at page 52. While filters would be extremely

[3] See *Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service*, Memorandum Opinion and Order, 12 FCC Rcd 3977, 3979 (1997) ("wide area, full mobility systems and service such as those being provided or anticipated in the cellular and PCS bands are likely to be of questionable feasibility").

effective, they can only be added to the WCS transmitter, not the telemetry receiver. Telemetry signals are frequently very weak and fluctuating due to the distance of the aircraft from the receive dish (as much as 200 miles distant), the low power of the transmitter (typically 10 watts with an omnidirectional antenna), and the extreme maneuvers of the aircraft under test.[4] This leaves little or no margin between the desired signal and the undesired signal, and renders it impossible to filter WCS's OOBE without filtering out the very telemetry signals that the operator is seeking to receive.

Other aspects of the Coalition's Reply are equally unpersuasive. AFTRCC has urged that, if average power measurement is to be used, a peak-to-average ratio ("PAR") of 6-8 dB should be adopted (Comments at page 6). The Coalition has opposed this arguing that the ratio should be as high as 13 dB (Reply at page 54).

The PAR is only an issue if the Commission should see fit to allow WCS to change to average power measurement. The simpler solution is to retain the existing peak power measurement Rule – just as Coalition members and affiliates themselves vigorously sought just three years ago. In 2005 the Wireless Communications Association International, Inc., the Coalition's founder,[5] defended the peak power measurement Rule against a request by WCS Wireless LLC for a waiver to allow average power measurement. See, e.g., Opposition to Amended Request for Waiver filed July 5, 2005 at 3 in ULS File No. 0002109551 et al., at pages 2-3 (observing that the WCS Wireless LLC proposal entailed "a 6 dB peak to average ratio;" that there would be a corresponding "6 dB increase in out-of-channel emissions;" and that, "for all of its rhetoric *it is striking that the[WCS Wireless LLC] Waiver Request contains no discussion whatsoever of the potential for interference to immediately adjacent WCS licensees.*" (emphasis in original)). To like effect were Comments filed by BellSouth Wireless Cable, Inc., predecessor-in-interest to Coalition member AT&T, observing that there would be a 6 dB increase in out-of-channel emissions by WCS Wireless, LLC if allowed to measure power on an average basis, and that this could have "adverse consequences for future adjacent channel WCS operations." Comments on Amended Request for Waiver filed July 5, 2005 at 3-4 [6]

In short, Coalition members had no problem previously opposing the change from peak to average power measurement, and even suggested that a 6 dB peak-to-average ratio was not stringent enough to protect them. Under the circumstances, the Commission should reject the

[4] It is precisely because the signals are so weak and so subject to fading that telemetry receive dishes are designed to be so sensitive.
[5] See Coalition Comments filed February 14, 2008 at note 1.
[6] The Coalition's reference to the use of a 13 dB ratio for the 700 MHz band is irrelevant. Id. at 54. 700 MHz licensees are not adjacent to very sensitive receiving technology like that used in flight testing.

Coalition's current proposal to adopt average power measurement, and its opposition to tightening the peak to average ratio to 6-8 dB as recommended by AFTRCC.[7]

* * *

Flight testing is a high-risk enterprise. Interference-free telemetry is essential so that ground controllers and flight engineers can monitor critical aircraft parameters such as engine temperatures, stress on air-foils, and airframe vibration, to name just a few. In the event ground personnel detect an unsafe condition, they are able to warn the flight crew so that immediate corrective measures can be taken. In short telemetry provides a real-time lifeline for aircraft safety.

Interference-free telemetry is also essential to the efficient conduct of flight test programs. A typical flight test can involve scores of personnel, a wide variety of ground equipment, possibly chase aircraft, the appropriate weather conditions, and the like. Millions of dollars can be tied up in even one flight test. Any degradation, much less interruption, in that data due to interference can entail a costly need to re-fly the test, and delay for the program in order to determine whether the aircraft performed as predicted.

Interference-free use of the spectrum allocated years ago for flight testing has been integral to the success of the U.S. aerospace industry, one of the nation's leading contributors to a positive net balance of trade. That use should be protected by maintaining the long-established OOBE restrictions applicable to 2345-2360 MHz.

A copy of this ex parte statement is submitted for the record in this proceeding.

Sincerely,

William K Keane

William K. Keane

Counsel for Aerospace and Flight Test Radio Coordinating Council

[7] The Coalition's citation to the 27 MHz Transfer Order for the proposition that prior coordination should not be adopted here (id. at n. 125) misses the point. AFTRCC offered coordination expressly limited to base stations. Coordination is infeasible for mobiles and portables -- but then there is no merit to the Coalition's argument that it be allowed a change in the rules to accommodate widespread mobile and portable use. Were it otherwise, the Coalition's members would reap a huge windfall at the expense of the American taxpayer given that the pennies-on-the-dollar price they paid for the spectrum was in large measure a reflection of the severe restrictions on mobile use under which they acquired it.

cc: The Honorable Michael J. Copps
The Honorable Jonathan S. Adelstein
The Honorable Deborah Taylor Tate
The Honorable Robert M. McDowell
Aaron Goldberger
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